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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/268,933	10/11/2002	Steven L. Schmidt	08500.7245-01-000	3663

7590 02/26/2003

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EXAMINER
AUGHENBAUGH, WALTER

ART UNIT	PAPER NUMBER
1772	

DATE MAILED: 02/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Docketed 3-4-03 Attorney TAH
Case 8500-7245-01
Due Date 5-26-03 w/ ext
Action Response Ltr
By MS
1 pmc

PTO-90C (Rev. 07-01)

Office Action Summary	Application No. 10/268,933	Applicant(s) SCHMIDT ET AL.
	Examiner Walter B Aughenbaugh	Art Unit 1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☒ Claim(s) *13-20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Objections

1. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 13-20 have been renumbered 15-22. The dependency of claims 18 and 19 (the claims incorrectly numbered 16 and 17) must be corrected so that claim 18 depends on claim 17 and so that claim 19 depends on claim 18.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 2, 11, 20 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regard to claims 1, 20 and 21, the terms "solid-stated polyamide" is vague and indefinite. What is the term "solid-stated" intended to recite?

In regard to claim 2, the full name of the polyamide represented by "MXD-6" must be written out in full.

Claim 11 rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a

gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the relationship between the "two oxygen-scavenging layers" and the "three adjacent polymer layers". How are the "two oxygen-scavenging layers" arranged among the "three adjacent polymer layers"? The fact that there are two oxygen-scavenging layers positioned between three polymer layers precludes that the three polymer layers are adjacent to each other.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in-
> (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
> (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

5. Claims 1-5, 7-9, 13-17 and 20-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Kim et al.

In regard to claims 1, 17 and 20-22, Kim et al. teach a package and container having a wall wherein the wall comprises an oxygen scavenging layer of a polyamide and up to 250 ppm of a transition metal catalyst (and optionally PET) (col. 3, line 66- col. 4, line 30 and col. 10, line 47-61). The polyamide of Kim et al. is necessarily in a solid state (as opposed to a liquid or gaseous state). Kim et al. teach that the package is for, inter alia, enclosing aqueous liquids as Kim et al. teach that in the prior art, a blend of a polyamide, polyethylene terephthalate (PET) and a transition metal catalyst has a greater gas barrier property, due to enhanced absorption of

oxygen, than PET which has been used in the prior art in packaging of soft drinks and beer (col. 2, lines 14-23). The composition taught by Kim et al. is an oxygen scavenging composition as Kim et al. teach that the composition has superior oxygen barrier and oxygen absorption characteristics (col. 7, lines 63-65). Kim et al. teach that the haze of the packages is less than 10% (col. 5, lines 6-16 and Tables 1-3).

In regard to claim 2, Kim et al. teach that the polyamide is MXD-6 (col. 3, line 66-col. 4, line 3).

In regard to claim 3, Kim et al. teach that the transition metal is cobalt (col. 10, line 61).

In regard to claims 4-5, Kim et al. teach that the oxygen scavenging layer is positioned between the adjacent layers (col. 4, lines 60-65). The adjacent layers are heat sealable layer (item 12 and outer protective layer (item 20) (col. 7, lines 8-16 and Fig. 2 and 3). Kim et al. teach that the adjacent layers are composed of a polyester or a polyamide (col. 4, lines 65-66). Kim et al. teach that polyamide (nylon) has oxygen barrier properties (col. 1, line 27) and Kim et al. also teach that the outer layer is a protective layer (i.e. a structural layer) (col. 7, lines 15-16).

In regard to claim 7-9, Kim et al. teach that the adjacent layers are composed of a polyester (col. 4, lines 65-66) and that PET is the preferred polyester (col. 4, line 65-col. 5, line 2).

In regard to claims 13 and 14, Kim et al. teach that the package has percent haze values less than 7% and 5% (col. 5, lines 6-16 and Tables 1-3).

In regard to claim 15, Kim et al. teach that the wall is a sidewall of the package (col. 8, line 1).

In regard to claim 16, Kim et al. teach that the entire package is formed of the oxygen scavenging blend of a polyamide and up to 250 ppm of a transition metal catalyst (col. 8, line 2); therefore, the entire package has a percent haze of less than 10%.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 6, 10-12, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al.

In regard to claim 6, while Kim et al. teach that the oxygen scavenging layer comprising polyamide and a transition metal (and optionally PET) is biaxially oriented to increase the oxygen barrier properties of the layer (col. 4, lines 31-33 and col. 8, line 33-37), Kim et al. fail to explicitly teach that the polymer of the adjacent layers composed of a polyester or a polyamide is biaxially oriented. However, since Kim et al. establish that it is notoriously well known to biaxially orient polymeric layers (such as a polyamide layer or a layer composed of a blend of

polyamide and polyester) in order to increase the oxygen barrier properties of the layer, one of ordinary skill in the art would have recognized to have biaxially oriented the adjacent layers composed of a polyester or a polyamide in order to increase the oxygen barrier properties of the layer as taught by Kim et al.

In regard to claims 10 and 12, Kim et al. teach the package having inner layer (item 12) for packaging soft drinks and beer (col. 2, lines 14-22) as discussed above. Kim et al. fail to explicitly teach that at least a portion of inner layer (item 12) is contacted with aqueous liquid. However, since Kim et al. disclose that the film is superior in oxygen barrier and oxygen absorbing properties that are required for packaging aqueous liquids such as soft drinks and beer, one of ordinary skill in the art would have recognized to have enclosed aqueous liquid in the package such that at least a portion of inner layer (item 12) is contacted with aqueous liquid.

In regard to claim 11, Kim et al. teach a package with three adjacent polymer layers (col. 7, lines 8-16 and Figures 2 and 3). Kim et al. fail to teach that the package includes at least a portion having two oxygen scavenging layers positioned between three adjacent polymer layers. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have added an additional oxygen scavenging layer of Kim et al. between two of the layers of the multilayer film with three adjacent polymer layers of Kim et al. in order to enhance the overall oxygen scavenging property of the package of Kim et al.

In regard to claims 18 and 19, Kim et al. fail to teach that the oxygen scavenging layer contains from 300 to 1000 ppm of cobalt (as claimed in claim 18) or 400 to 800 ppm of cobalt (as claimed in claim 19). However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have increased the amount of cobalt through routine

experimentation to determine the cobalt concentration that yields the optimal oxygen scavenging performance depending on the requirements for the particular desired end use, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art in the absence of unexpected results. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. 5,021,515 to Cochran et al.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter B Aughenbaugh whose telephone number is 703-305-4511. The examiner can normally be reached on Monday-Friday from 9:00am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on 703-308-4251. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

wba
02/21/03 WBA

HAROLD PYON
SUPERVISORY PATENT EXAMINER 2/24/03
1772

Notice of References Cited	Application/Control No. 10/268,933	Applicant(s)/Patent Under Reexamination SCHMIDT ET AL.	
	Examiner Walter B Aughenbaugh	Art Unit 1772	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-6239210	05-2001	Kim et al.	524/538
	B	US-5021515	06-1991	Cochran et al.	525/371
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

FORM PTO-1449(Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT	ATTY. DOCKET NO. C0762/7237	SERIAL NO. 09/236,498
	APPLICANT Schmidt et al.	
	FILING DATE January 26, 1999	GROUP 3727

U.S. PATENT DOCUMENTS

Exam Init	Ref Des	Document No.	Date	Name	Class	Sub Class	FILING DATE If Appropriate
		4,535,901	08/20/85	Okudaira et al.	215	1	

FOREIGN PATENT DOCUMENTS

		Doc. No. (11)	Pub. Date (43)	Country	Class	Sub Class	Translation Yes	Translation No
		AU 199934976 A1	23.12.99	Australia				

OTHER ART
(Including Author, Title, Date, Pertinent Pages, Publication, Etc.)

* a copy of this reference is not provided as it was previously cited by or submitted to the office in a prior application, Serial No. _____, filed _____, and relied upon for an earlier filing date under 35 U.S.C. 120 (continuation, continuation-in-part, and divisional applications).

EXAMINER	DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered.
Include copy of this form with next communication to applicant